AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph that begins on page 9, line 4, with the following:

A flow diagram illustrating the initialization process of the transmit buffer of the present invention is shown in Figure 6. With reference to Figure 5 as well, upon reset or power up, a number of segments equal to the desired number of queues to be implemented are marked as occupied (step 90). Thus, these nine segments are ready for storing data from each of the nine queues. The next segment pointers, however, are not valid yet, i.e. contain the NUL value. For example, a one in the segment status bit indicates a segment is occupiesd and a zero indicates it is available. In the example presented herein, the first nine segments are marked as occupied. Note that each queue always comprises at least one memory segment.

Please replace the paragraph that begins on page 12, line 3, with the following:

The flush process is similar to the process of releasing memory segments after a packet is read. When a queue is a flushed, the segment controller begins releasing memory segments from the initial read pointer (step 140). The segment status bit corresponding to the particular memory segment is cleared, i.e., set to zero (step 142). The next segment pointer is used to find the next segment to be cleared (step 144). This process continues until the memory segment is reached in which the write pointer is located (step 146). This indicates that the flush is finished. The last memory segment is not released since each queue comprises at least one memory segment.